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C. REMARKS

Status of the Claims

Claims 1-20 are currently present in the Application, and claims 1, 8, and 14 are independent claims. Claims 1-20 currently stand rejected. Claims 1, 8 and 14 have been amended to include limitations formerly found in claims 2, 9, and 15, respectively, and claims 2, 9, and 15 have been cancelled. Claims 21-23 have been added in this Response.

Examiner Interview

Applicants note with appreciation the interview conducted between Applicants' representative and the Examiner on May 4, 2005. While no agreement was reached during the interview, Applicants' representative and the Examiner discussed various differences between the primary reference (U.S. Pat. No. 5,946,373 to Harris) and various claim limitations. In particular, Applicants' representative explained how components (telecommunication alarms) in Harris were confined to a particular topology (a telecommunications network), while in original claims 2, 9, and 15, Applicants claimed one or more components that are capable of operating on a plurality of topographies. Applicants' representative directed the Examiner's attention to Applicants' Figure 2 by way of a depiction of components capable of operating on a plurality of topographies. In addition, Applicants' representative explained how Harris did not teach or suggest the limitations found in claims 6, 13, and 19. In particular, the Office Action attempts to interchange physical telecommunications "trunks" in Harris for Applicants' "components" used in these claims, while software-based "alarms" are interchanged for Applicants' "components" in the independent claims.

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Claim Objections - Objections to Specification

The Examiner objected to Applicants' abstract because the Examiner mistakenly believed that the abstract was too long (over 150 words). Applicants reviewed the abstract and discovered that there are 135 words in Applicants' abstract. Therefore, Applicants' abstract falls within the suggested range of 50 to 150 words. Accordingly, Applicants' respectfully request that the objection to Applicants' abstract be withdrawn.

Drawings

Applicants note with appreciation the acceptance of Applicants' formal drawings that were filed with Applicants' original application.

Newly Added Claims - 21 - 23

Applicants have added dependent claims 21, 22, and 23. These claims depend on independent claims 1, 8 and 14, respectively. The new claims further clarify one aspect of Applicants' invention where a single component is installed on more than one topology. The limitations of these claims include:

- selecting one of the topography neutral application components; and
- installing a first copy of the selected topography neutral application component on a first topology installation and a second copy of the selected topography neutral application component on a second topology installation, wherein the first and second topology installations are dissimilar topologies.

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Support for the limitations in these new claims is provided, in part, in Applicants' specification, page 27, lines 20-23 which states:

The application components are topography neutral so that a common application component can be installed on many different topology installations. (emphasis added)

As discussed with the Examiner during the Examiner interview, and as elaborated in the subsequent section, the primary reference, U.S. Patent No. 5,946,373 to Roger D. Harris (hereinafter "Harris"), discusses components ("alarms") that operate in a single topology (a telecommunications network). In light of this shortcoming, Harris' components are unable to be installed on a plurality of topologies, unlike Applicants' invention as claimed in new claims 21-23. In addition, Applicants' independent claims clearly support claims 21-23. This provides further support for Applicants' assertion that Applicants' independent claims, as amended, are allowable over Harris. This support, coupled with Applicants' remarks in the following section, provide ample substantiation for the allowability of Applicants' independent claims.

Claim Rejections - Alleged Anticipation Under 35 U.S.C. § 102

Claims 1-6 and 9-19 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated, and therefore unpatentable, over U.S. Patent No. 5,946,373 to Roger D. Harris (hereinafter "Harris"). Applicants respectfully traverse the rejections.

Applicants claim a method/system/program product for developing topography based management systems. Each of Applicants' independent claims include the limitations of:

- analyzing a topography design corresponding to a topography;

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- identifying one or more topography requirements based on the analysis;
- creating topography components corresponding to the identified topography requirements, wherein each of the components is adapted to interoperate with one or more operating environments, and wherein at least one of the components is a topography neutral application component that is adapted to interoperate with more than one topography; and
- storing component data in a topography data store, the component data describing one or more of the components.

The Office Action contends that each of these limitations is taught by Harris. A review of the Harris patent, however, reveals that Harris does not teach or suggest Applicants' claimed limitations.

Applicants respectfully direct the Examiner's attention to MPEP § 2131, which states, in part, that in order "to anticipate a claim, the reference must teach every element of the claim." The text of MPEP § 2131 is as follows:

2131 - TO ANTICIPATE A CLAIM, THE REFERENCE MUST TEACH EVERY ELEMENT OF THE CLAIM.

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). >"When a claim covers several structures or compositions, either generically or as alternatives, the claim is deemed anticipated if any of the structures or compositions within the scope of the claim is known in the prior art." *Brown v. 3M*, 265 F.3d 1349, 1351, 60 USPQ2d 1375, 1376 (Fed. Cir. 2001) (claim to a system for setting a computer clock to an offset time to address the Year 2000 (Y2K) problem, applicable to records with year date data in "at least one of two-digit, three-digit, or four-digit" representations, was held anticipated by a system that offsets year dates in only two-digit formats). See also MPEP § 2131.02.< "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor*

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Co., 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must be arranged as required by the claim, but this is not an ipsissimis verbis test, i.e., identity of terminology is not required. In re Bond, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990). Note that, in some circumstances, it is permissible to use multiple references in a 35 U.S.C. 102 rejection. See MPEP § 2131.01.

As detailed below, the Harris reference falls considerably short of the requirements set under MPEP § 2131 for rejecting Applicants' claims under 35 U.S.C. § 102(b). Applicants note that the text cited in Harris to support the Office Action's rejection often has nothing to do whatsoever with Applicants' claimed limitations. Applicants note that Harris is directed at a topology-based approach of analyzing faults in a telecommunications network, while Applicants' invention is directed at developing topography based management systems. Not only is Harris directed at a somewhat different technology than Applicants' claimed invention, but Harris is directed at analyzing faults in an existing telecommunications network while Applicants' claimed invention is directed at "developing topography based management systems." Because Harris is directed to a different stage in the development lifecycle (Harris' maintenance and repair of an existing system versus Applicants' creation/development of a new system), it is no wonder that Harris falls short of teaching Applicants' claimed invention.

The Office Action contends that Harris teaches Applicants' claimed *analyzing a topography design corresponding to a topography*, citing col. 6, lines 5-15 of Harris. In the cited section, Harris reads as follows:

The analysis of a given fault alarm (213) is largely dependent upon the precise behavior of the reporting

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equipment. Therefore, it is necessary to consider the device type and the alarm type in determining the significance of a given alarm. This part of the analysis might be implemented with "truth tables" or with a rule-based "inference engine", or a combination of both. Each truth table entry or rule condition must first specify an alarm and device type to be operated upon and the conditions necessary to consider that alarm "significant" (with respect to any other alarms present on the same circuit).

In the cited section, Harris is describing analyzing fault alarms used in a telecommunications system. In contrast, Applicants' claimed limitation is for analyzing a topography design that corresponds to a topography. Applicants describe "topography" as being a layered software system that is suitable for a particular management philosophy or to a particular customer requirement (see Summary). Harris' description of telecommunications alarms and alarm types has absolutely nothing to do with Applicants' claimed limitation.

The Office Action rejects the next limitation of Applicants' independent claims (identifying one or more topography requirements based on the analysis), as being taught by Harris at col. 6, lines 16-25. As an initial matter, because Harris never teaches the analysis of a topography design, Harris simply cannot teach or suggest identifying anything based on such analysis. The cited section of Harris reads as follows:

(Although the analysis process might also be implemented directly in code, using truth tables or inference engine rules allows ease of maintenance when new alarm analysis requirements are identified by the system users or when new equipment types are added to the network. The topology-based fault analysis implemented by this invention will be described in very general terms, but in practice it is highly desirable to have precise processing and reporting control over each specific alarm produced by each particular type of equipment.)

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In the cited section, Harris teaches identifying "new alarm analysis requirements." Nowhere in the cited section of Harris, or anywhere else in the Harris reference, does Harris teach or suggest Applicants' claimed limitation of *identifying one or more topography requirements based on the analysis*. The Office Action fails to show how Harris' alarm analysis requirements are remotely similar, let alone interchangeable, with Applicants' claimed topography requirements.

As Harris does not teach or suggest "identifying ... topography requirements," it follows that Harris cannot teach Applicants' next limitation of creating topography components corresponding to the identified topography requirements, wherein each of the components is adapted to interoperate with one or more operating environments, and wherein at least one of the components is a topography neutral application component that is adapted to interoperate with more than one topography.

Moreover, this limitation of each of the independent claims has been amended to include limitations formerly found in dependent claims 2, 9, and 15. The limitation added to each independent claim is directed at *creating a topography neutral application component, wherein the topography neutral application component is adapted to interoperate with more than one topography*. The Office Action contends that Harris teaches this limitation, citing col. 4, lines 15-25. The Office Action also contended that this section of Harris taught the "storing" limitation of Applicants' independent claims. While Harris does teach "storing" data in a database, it is clear that Harris does not, in the cited section or elsewhere, teach that the topography neutral component is adapted to interoperate with more than one topography. The section of Harris is as follows:

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The first step in the process implemented by this invention is to maintain a database of all active fault alarms 103, using the equipment-identifying data (extracted from the alarm message) as the index key. For equipments that handle multiple circuits, such as multiplexers and cross-connects, the alarm data must also include other information (a port identifier, for example) to indicate which specific circuit on that equipment is in alarm. New alarms (step 202) are added to this database at step 203, and cleared alarms are removed at step 204.

Harris, col. 4, lines 15-25.

Applicants are confused as to how Harris' teaching of storing alarm data in a database can be construed as creating a *topography neutral application component*, wherein the *topography neutral application component* is adapted to interoperate with more than one topography, as claimed by Applicants. The Office Action provides no reasoning as to how this section of Harris can be construed in this manner. Indeed, a plain reading of this section of Harris reveals that Harris is void of any such teaching. Moreover, a review of the Harris reference as a whole reveals that nowhere does Harris teach or suggest Applicants' claimed limitation.

As outlined above, Harris clearly does not teach or suggest each of Applicants' claimed limitations set forth in each of Applicants' independent claims as required to support the rejection of these claims. Consequently, the rejection of Applicants' independent claims under 35 U.S.C. § 102 has been overcome and such claims are allowable over the prior art of record.

Next, Applicants claim the limitation of *storing component data in a topography data store, the component data describing one or more of the components*. The Office Action contends that

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Harris teaches this limitation, citing col. 4, lines 15-25 and col. 5, lines 9-35.

The first step in the process implemented by this invention is to maintain a database of all active fault alarms 103, using the equipment-identifying data (extracted from the alarm message) as the index key. For equipments that handle multiple circuits, such as multiplexers and cross-connects, the alarm data must also include other information (a port identifier, for example) to indicate which specific circuit on that equipment is in alarm. New alarms (step 202) are added to this database at step 203, and cleared alarms are removed at step 204.

Harris, col. 4, lines 15-25.

The topology data elements necessary for this invention are thus:

Circuit table:

Circuit identifier

Circuit capacity (e.g. DS-3)

Left end site identifier

Left end equipment type (e.g. M13)

Left end equipment uniqueness identifier at that site

Left end equipment circuit identifier (e.g. port number)

Right end station identifier

Right end equipment type

Right end equipment uniqueness identifier at that station

Right end equipment circuit identifier

Segment table:

Circuit identifier

Segment sequence number

Left side site identifier

Left side equipment type

Left side equipment uniqueness identifier at that site

Left side equipment circuit identifier

Right side site identifier

Right side equipment type

Right side equipment uniqueness identifier at that site

Right side equipment circuit identifier

Circuit identifier of any carrier trunk for the segment

Harris, col. 5, lines 9-35.

The cited sections of Harris serve to buttress Applicants' assertion that Harris does not teach or suggest Applicants' claimed invention of analyzing a topography design, identifying

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topography components based on the analysis, creating the components, and storing the component data. The data being stored by Harris are related to telecommunications equipment used with Harris' telecommunication alarms and are not related to a topography component that was identified based upon an analysis of a topography design.

The remaining claims each depend, directly or indirectly, on one of the allowable independent claims and, therefore, are allowable for at least the same reasons that the independent claims are allowable. Notwithstanding the allowability of these claims for this reason alone, in the following paragraphs Applicants discuss the allowability of the dependent claims on separate grounds.

Dependent claims 3, 10, and 16 are Markush claims specifying that at least one of the topography requirements is selected from the group consisting of a communication framework, a deployment mechanism, a security infrastructure, and an operation conduit. The Office Action contends that Harris teaches this limitation, citing col. 2, lines 40-57. This section of Harris reads as follows:

Fault alarm data are collected from network multiplexer and transmission equipments. Each alarm represents a specific fault detected on a particular piece of equipment. These alarms are then correlated to each other by using a database that describes the network topology; this database defines the equipments that implement the network and the connections between equipments. These equipment connections define the routing of circuits and trunks through the network. The topology database determines: which trunk or ordered sequence of trunks contain a given circuit; which circuits are contained within a given trunk; and the topological route through the network for any given circuit or trunk. Using this knowledge of network topology, significant fault alarm events (that is, those most

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indicative of the location of a failure) can be distinguished from "sympathetic" events (those fault indicators propagated downstream and to lower multiplex levels from a failure) to determine the topographic point of failure as accurately as possible. Moreover, correlated alarms on multiple circuits contained within the same trunk can be used to infer an outage on that trunk, even if no fault alarms have been received from the trunk equipment. Or, if direct alarms have been reported on a trunk, then corresponding alarms on the circuits contained in that trunk serve to confirm that a traffic-affecting outage has occurred (whereas the absence of circuit alarms might indicate that the circuits have been rerouted).

This section of Harris details sources of fault alarm data in Harris' telecommunication network. While a telecommunications network (communications framework) is discussed by Harris, Harris fails to teach or suggest that the communications network is part of "topography requirements," nor does Harris teach or suggest that these "topography requirements" include a deployment mechanism, a security infrastructure, or an operation conduit. The Office Action provides no rationale and cites no section of Harris that teaches or infers that Harris' telecommunications alarm data is interchangeable with Applicants' claimed topography design and requirements. Therefore, as outlined above, claims 3, 10, and 16 are each allowable over the art of record for these reasons in addition to the fact that each of these claims depends upon an allowable independent claim.

Dependent claims 4, 11, and 17 are Markush claims specifying that the component data includes one or more fields selected from the group consisting of a component identifier, a target platform, a development environment, a control model, a topography scale, a management style, a component dependency, a component placement, a component packaging data, a component bundling data, a component build option, and a component runtime

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option. The Office Action contends that Harris teaches these limitations and cites col. 4, lines 49-50. This section of Harris, actually a single sentence, reads: "The topology database can identify circuit 301 with an arbitrary but unique number." While Harris' unique identifier may be similar to a component identifier, Harris does not teach or suggest component data that includes a target platform, a development environment, a control model, a topography scale, a management style, a component dependency, a component placement, a component packaging data, a component bundling data, a component build option, and a component runtime option. Therefore, as outlined above, claims 4, 11, and 17 are each allowable over the art of record for these reasons in addition to the fact that each of these claims depends upon an allowable independent claim.

Dependent claims 5, 12, and 18 each add the limitations of:

- saving each component in a component library;
- wherein the storing further includes writing a record in a database file, each record corresponding to a distinct component.

While Harris teaches saving alarm data in a database, nowhere does Harris teach or suggest that the "components" are created by "identifying ... topography requirements" based upon an analysis of "a topography design corresponding to a topography," as claimed by Applicants in each of the independent claims. Therefore, the "components" (alarm data) in Harris are not interchangeable for Applicants' claimed "components" because Harris does not teach or suggest creating the components using the method/system/program product claimed by Applicants. Therefore claims 5, 12, and 18 are allowable over Harris because

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Harris does not teach or suggest the same "component data" as claimed by Applicants.

Dependent claims 6, 13, and 19 add the limitations of:

- identifying one or more client attributes corresponding to a client;
- comparing the identified client attributes to the topography components; and
- selecting one or more topography components based on the comparing.

The Office Action contends that Harris teaches each of these claimed limitations, citing col. 10, line 59 - col. 11, line 7 and col. 12, lines 27-35 for the first ("identifying") limitation, col. 11, lines 8-10 for the second ("comparing") limitation, and col. 11, lines 20-25 for the third ("selecting") limitation. Each of these sections of Harris are discussed below:

Col. 10, line 59 - col. 11, line 7:

The result of process 264 is a list of one or more trunks that could be the location of a fault causing the observed circuit alarms. This list is returned to the Evaluate Circuit Alarm Counts on Trunk process in FIG. 2E. There may be many trunks which are over their circuit-alarm thresholds, which may or may not be in this list, but all of which can be explained by a fault in this set of trunks. Each of these trunks will be evaluated separately, and in fact each of these trunks may be evaluated several times as new circuit alarms are received. Therefore, a separate data structure needs to be maintained to record this inferred fault location. Specifically, this data structure will record whether or not the inferred fault has already been reported, and it will allow detection of any change that requires that the report needs to be updated (such as any shortening or lengthening of the list of possible faulted trunks).

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Col. 12, lines 27-35:

To implement this system common-route analysis, the topology database is searched in step 248 to retrieve the ordered list of sites through which the given system traverses. A separate set of data structures is maintained to represent the transmission system outages. One of these structures can represent a single system outage (if no other failed system shares the same network route) or several individual system outages that all share some common route in the network.

The above sections of Harris describe the steps used to process a list of telecommunications trunks that may be the source of a telecommunication fault by traversing a list of sites stored in a database. Importantly, these sections do not teach or suggest "identifying one or more client attributes corresponding to a client." The Office Action provides no support whatsoever in interchanging Applicants' claim elements "client" and "client attributes" with Harris' telecommunications trunks and alarm data. Indeed, Harris is void of any such teaching. As previously stated, Harris is directed at a telecommunications alarm system and does not teach or suggest identifying client attributes nor does Harris teach or suggest dealing with any clients whatsoever.

Col. 11, lines 8-10

Step 265 compares the existing set of such data structures against the list of trunks produced in step 264 to determine if there is any match or partial match.

The above section of Harris compares data structures with telecommunication trunks and does not teach or suggest Applicants' claimed limitation of "comparing the identified client attributes to the topography components." As discussed above, Harris does not teach or suggest client attributes or clients and therefore does not teach comparing client

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attributes. Moreover, in traversing the rejection of claims 1, 8, and 14, Applicants noted that Harris does not teach or suggest "topography components" as such element is claimed by Applicants.

Col. 11, lines 20-25:

If any intersection is found with an existing inferred outage data structure, the association of the new outage to the existing depends on the precise condition of the correlation between the two sets of trunks. There are four possibilities:

In the above-cited section of Harris, Harris teaches a correlation between telecommunications trunks based on an intersection with an inferred data outage structure for a telecommunications network. Importantly, Harris is not "selecting" anything, let alone "selecting one or more topography components based on the comparing," as claimed by Applicants.

Consequently, as outlined above, claims 6, 13, and 19 are each allowable over the art of record for these reasons in addition to the fact that each of these claims depends upon an allowable independent claim.

Claim Rejections - Alleged Obviousness Under 35 U.S.C. § 103

Claims 7 and 20 stand rejected under 35 U.S.C. § 103 as allegedly being obvious, and therefore unpatentable, over U.S. Patent No. 5,946,373 to Roger D. Harris (hereinafter "Harris") in view of U.S. Patent No. 5,524,253 to Pham et al. (hereinafter "Pham"). Applicants respectfully traverse the rejections.

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As an initial matter, claims 7 and 20 depend on dependent claims 6 and 19, respectively, which, in turn, depend upon independent claims 1 and 14, respectively. The allowability of independent claims 1 and 14 and dependent claims 6 and 19 has been established in Applicants' traversal of these rejections in the preceding section. Consequently, claims 7 and 20 are allowable for at least the same reasons as claims 6 and 19 are allowable and for at least the same reasons as claims 1 and 14 are allowable.

The Office Action admits that Harris does not teach or suggest "installing the selected topographical components on one or more client computer systems," however the Office Action contends that this limitation is taught by Pham. Applicants note that Pham is directed to configuration files that define a distributed system that is to be integrated (see Abstract), while Harris is directed at a system that uses a database to keep track of telecommunication alarm data. The Office Action provides no rationale whatsoever as to why one skilled in the art would be motivated to combine the teachings of Pham with those of Harris other than to arrive at the exact limitations found in Applicants' claims 7 and 20. Therefore, Applicants assert that there is no motivation in the references to combine the teachings. Instead, the Office Action used Applicants' claims as a guideposts to select the references and, therefore, engaged in the use of impermissible hindsight in rejecting Applicants' claims as set forth in claims 7 and 20. Therefore, in addition to the allowability of claims 7 and 20 because they depend on allowable claims as discussed in the preceding section, Applicants respectfully assert that the rejection of Applicants claims 7 and 20 under 35 U.S.C. § 103 is improper.

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because (1) there is no motivation to combine the references as set forth in the references themselves, and (2) the Office Action used impermissible hindsight in rejecting Applicants' claims.


Conclusion

As a result of the foregoing, it is asserted by Applicants that the remaining claims in the Application are in condition for allowance, and Applicants respectfully request an early allowance of such claims.

Applicants respectfully request that the Examiner contact the Applicants' attorney listed below if the Examiner believes that such a discussion would be helpful in resolving any remaining questions or issues related to this Application.

Respectfully submitted,

By


Joseph T. Van Leeuwen, Reg. No. 44,383
Van Leeuwen & Van Leeuwen
Attorneys for Applicant
Telephone: (512) 301-6738
Facsimile: (512) 301-6742